

REMARKS

Claims 1-12 are all the claims pending in the application; each of the claims has been rejected.

New claims 13 and 14 have been added. After entry of the Amendment, claims 1-14 will be pending.

Claims 1-4 and 11-12 have been amended to convert them into method claims.

Claims 11 and 12 have been amend to correct their improper multiple dependency and claims 13 and 14 have been added to recite the subject matter cancelled from claims 11 and 12, respectively.

Claims 5-10 have been amended to delete side groups defined for some of the variable positions in the compounds recited in the claims.

No new matter has been added. Entry of this amendment is earnestly solicited.

**I. Election of Species**

At page 2 of the Office Action, the Examiner states that the application contains claims directed to more than one species of the generic invention. Further, the Examiner asserts, these species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The Examiner notes that a provisional election was made with traverse to prosecute compound number 302 on page 72, table 1, of the specification, and claims 1 and 2. The Examiner requires affirmation of the election in reply to the Office Action.

In response, Applicants affirm the election, without traverse, to compound number 302 on page 72, table 1, of the specification, and in claims 1 and 2.

**II. Rejection of Claims Under 35 U.S.C. §112**

At page 4 of the Office Action, claims 1-12 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

The Examiner asserts that it is unclear whether Applicants are intending to claim a compound or a composition. The Examiner further states that claim 4 is a substantial duplicate of claims 1-3 and will therefore be objected to if claims 1-3 are found to be allowable. Similarly, the Examiner states that claims 11 and 12 are duplicates of claims 5-10.

In response, Applicants note that included herewith are amendments to the claims. These amendments clarify the invention in that claims 5-10 are directed to novel hydroxyformamidine derivatives and claims 1-4 and 11-14 are directed to methods of using those derivatives.

Applicants assert that the claims are now definite as written, and therefore respectfully request reconsideration and withdrawal of the rejections.

**III. Rejection of Claims Under 35 U.S.C. §102**

At page 6 of the Office Action, claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by any of six references cited by the Examiner.

In response, Applicants note that claims 1-4 and 11-14 recite new methods for using the hydroxyformamidine derivatives recited in claim 1 (claims 1-3, 11 and 13: a method of inhibiting production of 20-hydroxyeicosatetraenoic acid using the derivatives; claims 4, 12 and 14: a therapeutic method for treatment of a kidney disease, a cerebrovascular disease or a circulatory disease using the derivatives).

Applicants assert that none of the prior art references recited by the Examiner teach the methods recited in claims 1-4 and 11-14. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection with regard to these claims.

As to claims 5-10, Applicants have amended the claims to delete some of the side groups defined for variable positions in the compounds recited in these claims. In view of the deletion of these side groups, Applicants assert none of the compounds now recited in the claims is taught in the prior art. Applicants therefore assert that none of the prior art references recited by the Examiner teach the compounds recited in claims 5-10. Accordingly, Applicants also respectfully request reconsideration and withdrawal of the rejection with regard to claims 5-10.

#### IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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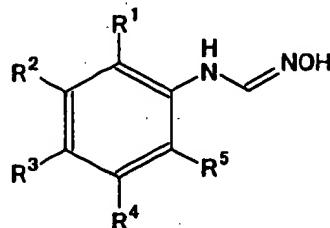
APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A method of inhibiting An inhibitor for production of 20-hydroxyeicosatetraenoic acid, comprising administering an effective amount of the, as an effective ingredient, a hydroxyformamidine derivative represented by the formula:



wherein R<sup>1</sup> to R<sup>5</sup> are identical or different and represent a hydrogen atom; a hydroxyl group; a carboxyl group; a halogen atom; a C<sub>1-14</sub> alkyl group; a C<sub>1-14</sub> alkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkenyl group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl group; a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group; a C<sub>2-6</sub> alkynyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>2-10</sub> alkanoyl group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>1-6</sub> hydroxyalkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkoxycarbonyl group; a 3-phenyl-2-propenylloxycarbonyl group; a C<sub>2-6</sub> alkoxycarbonyl C<sub>1-6</sub> alkyl group; a di(C<sub>1-6</sub> alkyl)amino C<sub>2-6</sub> alkoxycarbonyl group; a mono- or di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-10</sub> alkanoylamino group; a C<sub>2-6</sub> alkanoylamino group substituted with a C<sub>1-6</sub> alkyl group; a benzoylamino group; a carbamoyl group; a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl or phenyl groups; an N-(N',N'-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl)carbamoyl group; a cyano group; a cyano C<sub>1-6</sub> alkyl group; a nitro group; a thiol group; a phenoxy group; a phenoxy group substituted with 1 to 3 substituents selected from the group

consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and halogen atoms; a phenylthio group; a nitrophenylthio group; a C<sub>1-6</sub> alkylsulfonyl group; a phenylsulfonyl group; a C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkyl group; a phenylsulfonyl C<sub>1-6</sub> alkylthio wherein the benzene ring is substituted with 1 to 5 halogen atoms; a phenyl group; a benzyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a biphenyl group; an α-cyanobenzyl group; an α-cyanobenzyl group substituted with 1 to 5 halogen atoms; a benzyl group substituted with a bicyclo[2.2.1]-hept-5-en-2,3-dicarboxyimidyl group; a benzoyl group; a styryl group; a styryl group substituted with 1 to 5 substituents selected from the group consisting of C<sub>1-6</sub> alkoxy groups and di(C<sub>1-6</sub> alkyl)amino alkyl groups; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyrimidinyl group; a pyrimidinyl group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups and C<sub>1-6</sub> alkoxy groups; a phthalimidoyl group; a phthalimidoyl group substituted with 1 to 3 halogen atoms; an N-carbazolyl group; a dioxopiperidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a phenylsulfonylamino group; a phenylsulfonylamino group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a C<sub>1-6</sub> alkylaminosulfonyl C<sub>1-6</sub> alkyl group; a thiadiazolyl group; an oxadiazolyl group; an oxadiazolyl group substituted with a substituted phenyl group wherein the substituents in the substituted phenyl group are 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a pyrrolidinyl group; a pyrazolyl group; a pyrazolyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and trifluoromethyl groups; a furyl group; a furyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>2-6</sub> alkoxycarbonyl groups; a

thienopyrimidinylthio group; a thienopyrimidinylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a thienopyridylthio group; a thienopyridylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a benzothiazolylthio group; a benzothiazolylthio group substituted with 1 to 3 halogen atoms; a group represented by the formula: -Y-(CR<sup>61</sup>R<sup>62</sup>)<sub>m</sub>-(CR<sup>63</sup>R<sup>64</sup>)<sub>n</sub>-R<sup>7</sup> [wherein Y represents an oxygen or sulfur atom; R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup> are identical or different and represent a hydrogen atom, a halogen atom, a C<sub>1-4</sub> alkyl group, or a trifluoromethyl group; R<sup>7</sup> represents a hydrogen atom; a halogen atom; a C<sub>1-14</sub> alkyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>2-10</sub> alkenyl group; a C<sub>2-6</sub> alkynyl group; a phenyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of nitro groups, cyano groups, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>1-6</sub> alkylthio groups, phenyl groups, phenoxy groups, phenethyl groups, C<sub>2-6</sub> alkoxycarbonyl groups, and halogen atoms; a cyano group; a carboxyl group; a C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkylthio group; a C<sub>2-6</sub> alkanoyloxy group; a C<sub>2-6</sub> alkanoyloxy C<sub>1-6</sub> alkyl group; a phenoxy group; a phenylthio group; an N-(C<sub>1-6</sub> alkyl)toluidino group; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkyl group; a piperidino group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkoxy group; a pyrrolidino group substituted with a C<sub>1-6</sub> alkyl group; a morpholino group substituted with a C<sub>1-6</sub> alkyl group; a morpholinyl group; a morpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a homomorpholinyl group; a thiomorpholinyl group; a thiomorpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a thiomorpholinyl group; a thiomorpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a piperadinyll group; a piperadin-1-yl group substituted with a C<sub>1-6</sub> alkyl group at the 4-position; a

homopiperidinyl group; a homopiperidinyl group substituted with a C<sub>1-6</sub> alkyl group; a pyridylthio group; a quinolyl group; a furyl group; an oxetanyl group; an oxolanyl group; a dioxolanyl group; a dioxolanyl group substituted with a C<sub>1-6</sub> alkyl group; an oxanyl group; a dioxanyl group; a dioxanyl group substituted with a C<sub>1-6</sub> alkyl group; a benzodioxanyl group; a pyrrolidon-1-yl group; a pyrrolidinyl group; an N-(C<sub>1-6</sub> alkyl)pyrrolidinyl group; a piperidinyl group; an N-(C<sub>1-6</sub> alkyl)piperidinyl group; a pyrrolyl group; a thienyl group; a thiazolyl group; a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a 2,6-purindion-7-yl group substituted with C<sub>1-6</sub> alkyl group(s); a furfuryl group; a di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-6</sub> alkoxycarbonyl group; or a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; m is an integer of 1 to 6; and n is an integer of 0 to 6]; or a group represented by the formula: -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup> [wherein R<sup>8</sup> and R<sup>9</sup> are identical or different and represent a hydrogen atom, a C<sub>1-10</sub> alkyl group, a C<sub>2-6</sub> alkanoyl group, an isoxazolyl group, an isoxazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiadiazolyl group, a thiadiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiazolyl group, a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridyl group, a pyridyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, a pyridazinyl group, a pyridazinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, an indazolyl group, or a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl groups, or alternatively, taken together with the nitrogen atom to which they are bonded, form a 3,5-dioxopiperadino group, a pyrrolidinyl group, a piperidino group, or a morpholino group], or alternatively,

the two groups adjacent to each other of R<sup>1</sup> to R<sup>5</sup>, taken together with the benzene ring to which they are bonded, form a phthalimide ring; a phthalimide ring substituted with a C<sub>1-6</sub> alkyl

group; an indole ring; an indane ring; an indazole ring; a benzotriazole ring; an S,S-dioxobenzothiophene ring; a 2,3-dihydroimidazo[2,1-b]benzothiazole ring; a dibenzofuran ring; a dibenzofuran ring substituted with a C<sub>1-6</sub> alkoxy group; a fluorene ring; a fluorene ring substituted with a halogen atom; a pyrene ring; a carbostyryl ring; a carbostyryl ring substituted with a C<sub>1-6</sub> alkyl group; a naphthalene ring; a naphthalene ring substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, nitro groups, and C<sub>1-6</sub> alkyl groups; a 1,2,3,4-tetrahydronaphthalene ring; a quinoline ring; a quinoline ring substituted with a C<sub>1-6</sub> alkyl group; an isoquinoline ring; a 2-oxo- $\alpha$ -chromene ring; a 2-oxo- $\alpha$ -chromene ring substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl groups; a cinnolin ring; a cinnolin ring substituted with a C<sub>1-6</sub> alkyl group; a phthalazindione ring; a benzothiazol ring; a benzothiazol ring substituted with a C<sub>1-6</sub> alkyl group; a benzodioxorane ring; or a benzobutyrolactone ring, or a pharmaceutically-acceptable salt thereof.

2. (Amended) The method of inhibiting inhibitor for production of 20-hydroxyeicosatetraenoic acid, comprising administering an effective amount of the, as an effective ingredient, a hydroxyformamidine derivative, according to claim 1<sup>Claim 1</sup>, wherein R<sup>1</sup> to R<sup>5</sup> are identical or different and represent a hydrogen atom; a hydroxyl group; a carboxyl group; a halogen atom; a C<sub>1-14</sub> alkyl group; a C<sub>1-14</sub> alkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkynyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>2-10</sub> alkanoyl group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>1-6</sub> hydroxyalkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkoxy carbonyl group; a 3-phenyl-2-propenyl oxycarbonyl group; a C<sub>2-6</sub> alkoxy carbonyl C<sub>1-6</sub> alkyl group; a di(C<sub>1-6</sub> alkyl)amino C<sub>2-6</sub> alkoxy carbonyl group; a mono- or

di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-10</sub> alkanoylamino group; a C<sub>2-6</sub> alkanoylamino group substituted with a C<sub>1-6</sub> alkyl group; a benzoylamino group; a carbamoyl group; a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl or phenyl groups; an N-(N',N'-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl)carbamoyl group; a cyano group; a cyano C<sub>1-6</sub> alkyl group; a nitro group; a thiol group; a phenoxy group; a phenoxy group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and halogen atoms; a phenylthio group; a nitrophenylthio group; a C<sub>1-6</sub> alkylsulfonyl group; a phenylsulfonyl group; a C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkyl group; a phenylsulfonyl C<sub>1-6</sub> alkylthio group wherein the benzene ring is substituted with 1 to 5 halogen atoms; a phenyl group; a benzyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a biphenyl group; an α-cyanobenzyl group; an α-cyanobenzyl group substituted with 1 to 5 halogen atoms; a benzyl group substituted with a bicyclo[2.2.1]-hept-5-en-2,3-dicarboxyimidyl group; a benzoyl group; a styryl group; a styryl group substituted with 1 to 5 substituents selected from the group consisting of C<sub>1-6</sub> alkoxy groups and di(C<sub>1-6</sub> alkyl)amino alkyl groups; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyrimidinyl group; a pyrimidinyl group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups and C<sub>1-6</sub> alkoxy groups; a phthalimidoyl group; a phthalimidoyl group substituted with 1 to 3 halogen atoms; an N-carbazolyl group; a dioxopiperidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a phenylsulfonylamino group; a phenylsulfonylamino group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a C<sub>1-6</sub> alkylaminosulfonyl C<sub>1-6</sub> alkyl group; a thiadiazolyl group; an oxadiazolyl group; an oxadiazolyl group substituted with a substituted phenyl group wherein the substituents in the substituted phenyl group are 1 to

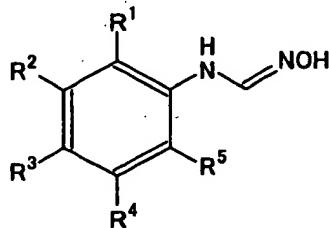
3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a pyrrolidinyl group; a pyrazolyl group; a pyrazolyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and trifluoromethyl groups; a furyl group; a furyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>2-6</sub> alcoxycarbonyl groups; a thienopyrimidinylthio group; a thienopyrimidinylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a thienopyridylthio group; a thienopyridylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a benzothiazolylthio group; a benzothiazolylthio group substituted with 1 to 3 halogen atoms; or a group represented by the formula: -Y-(CR<sup>61</sup>R<sup>62</sup>)<sub>m</sub>-(CR<sup>63</sup>R<sup>64</sup>)<sub>n</sub>-R<sup>7</sup> [wherein Y represents an oxygen or sulfur atom; R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup> are identical or different and represent a hydrogen atom, a halogen atom, a C<sub>1-4</sub> alkyl group, or a trifluoromethyl group; R<sup>7</sup> represents a hydrogen atom; a halogen atom; a C<sub>1-14</sub> alkyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>2-10</sub> alkenyl group; a C<sub>2-6</sub> alkynyl group; a phenyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of nitro groups, cyano groups, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>1-6</sub> alkylthio groups, phenyl groups, phenoxy groups, phenethyl groups, C<sub>2-6</sub> alcoxycarbonyl groups, and halogen atoms; a cyano group; a carboxyl group; a C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkylthio group; a C<sub>2-6</sub> alkanoyloxy group; a C<sub>2-6</sub> alkanoyloxy C<sub>1-6</sub> alkyl group; a phenoxy group; a phenylthio group; an N-(C<sub>1-6</sub> alkyl)toluidino group; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkyl group; a piperidino group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkoxy group; a pyrrolidino group substituted with a C<sub>1-6</sub>

alkyl group; a morpholino group substituted with a C<sub>1-6</sub> alkyl group; a morpholinyl group; a morpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a homomorpholinyl group; a thiomorpholino group; a thiomorpholino group substituted with a C<sub>1-6</sub> alkyl group; a thiomorpholinyl group; a thiomorpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a piperadinyl group; a piperadin-1-yl group substituted with a C<sub>1-6</sub> alkyl group at the 4-position; a homopiperidinyl group; a homopiperidinyl group substituted with a C<sub>1-6</sub> alkyl group; a pyridylthio group; a quinolyl group; a furyl group; an oxetanyl group; an oxolanyl group; a dioxolanyl group; a dioxolanyl group substituted with a C<sub>1-6</sub> alkyl group; an oxanyl group; a dioxanyl group; a dioxanyl group substituted with a C<sub>1-6</sub> alkyl group; a benzodioxanyl group; a pyrrolidon-1-yl group; a pyrrolidinyl group; an N-(C<sub>1-6</sub> alkyl)pyrrolidinyl group; a piperidinyl group; an N-(C<sub>1-6</sub> alkyl)piperidinyl group; a pyrrolyl group; a thietyl group; a thiazolyl group; a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a 2,6-purindion-7-yl group substituted with C<sub>1-6</sub> alkyl group(s); a furfuryl group; a di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-6</sub> alkoxy carbonyl group; or a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; m is an integer of 1 to 6; and n is an integer of 0 to 6], or a pharmaceutically-acceptable salt thereof.

3. (Amended) The method of inhibiting inhibitor for production of 20-hydroxyeicosatetraenoic acid, comprising administering an effective amount of the, as an effective ingredient, a hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof, according to Claim 2, wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>, and R<sup>5</sup> represent hydrogen atoms.

4. (Amended) A therapeutic method for treatment of a kidney disease, a cerebrovascular disease or a circulatory disease, said method comprising administering to a patient having a kidney disease, a cerebrovascular disease or a circulatory disease an effective

amount of the ~~The inhibitor for production of 20-hydroxyeicosatetraenoic acid, according to any one of Claims 1 to 3, which is a therapeutic agent for kidney diseases, cerebrovascular diseases, or circulatory diseases~~ hydroxyformamide derivative represented by the formula:



wherein R<sup>1</sup> to R<sup>5</sup> are identical or different and represent a hydrogen atom; a hydroxyl group; a carboxyl group; a halogen atom; a C<sub>1-14</sub> alkyl group; a C<sub>1-14</sub> alkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkenyl group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl group; a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group; a C<sub>2-6</sub> alkynyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>2-10</sub> alkanoyl group; a C<sub>1-6</sub> hydroxalkyl group; a C<sub>1-6</sub> hydroxalkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkoxy carbonyl group; a 3-phenyl-2-propenyl oxycarbonyl group; a C<sub>2-6</sub> alkoxy carbonyl C<sub>1-6</sub> alkyl group; a di(C<sub>1-6</sub> alkyl)amino C<sub>2-6</sub> alkoxy carbonyl group; a mono- or di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-10</sub> alkanoylamino group; a C<sub>2-6</sub> alkanoylamino group substituted with a C<sub>1-6</sub> alkyl group; a benzoylamino group; a carbamoyl group; a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl or phenyl groups; an N-(N',N'-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl)carbamoyl group; a cyano group; a cyano C<sub>1-6</sub> alkyl group; a nitro group; a thiol group; a phenoxy group; a phenoxy group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and halogen atoms; a phenylthio group; a nitrophenylthio group; a C<sub>1-6</sub> alkylsulfonyl group; a phenylsulfonyl group; a C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkyl group; a phenylsulfonyl C<sub>1-6</sub> alkylthio wherein the benzene ring is substituted with 1 to 5 halogen atoms; a phenyl group; a benzyl group; a phenyl group substituted with 1 to 3

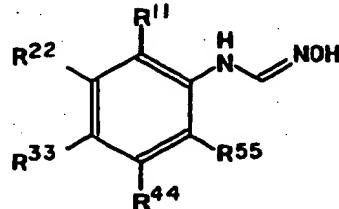
substituents selected from the group consisting of cyano groups, halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a biphenyl group; an α-cyanobenzyl group; an α-cyanobenzyl group substituted with 1 to 5 halogen atoms; a benzyl group substituted with a bicyclo[2.2.1]-hept-5-en-2,3-dicarboxyimidyl group; a benzoyl group; a styryl group; a styryl group substituted with 1 to 5 substituents selected from the group consisting of C<sub>1-6</sub> alkoxy groups and di(C<sub>1-6</sub> alkyl)amino alkyl groups; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyrimidinyl group; a pyrimidinyl group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups and C<sub>1-6</sub> alkoxy groups; a phthalimidoyl group; a phthalimidoyl group substituted with 1 to 3 halogen atoms; an N-carbazolyl group; a dioxopiperidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a phenylsulfonylamino group; a phenylsulfonylamino group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a C<sub>1-6</sub> alkylaminosulfonyl C<sub>1-6</sub> alkyl group; a thiadiazolyl group; an oxadiazolyl group; an oxadiazolyl group substituted with a substituted phenyl group wherein the substituents in the substituted phenyl group are 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a pyrrolidinyl group; a pyrazolyl group; a pyrazolyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and trifluoromethyl groups; a furyl group; a furyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>2-6</sub> alkoxycarbonyl groups; a thienopyrimidinylthio group; a thienopyrimidinylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a thienopyridylthio group; a thienopyridylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a benzothiazolylthio group; a benzothiazolylthio group substituted with 1 to 3 halogen atoms; a group represented by the formula: -Y-(CR<sup>61</sup>R<sup>62</sup>)<sub>m</sub>-(CR<sup>63</sup>R<sup>64</sup>)<sub>n</sub>-R<sup>7</sup> [wherein Y represents

an oxygen or sulfur atom; R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup> are identical or different and represent a hydrogen atom, a halogen atom, a C<sub>1-4</sub> alkyl group, or a trifluoromethyl group; R<sup>7</sup> represents a hydrogen atom; a halogen atom; a C<sub>1-14</sub> alkyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>2-10</sub> alkenyl group; a C<sub>2-6</sub> alkynyl group; a phenyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of nitro groups, cyano groups, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>1-6</sub> alkylthio groups, phenyl groups, phenoxy groups, phenethyl groups, C<sub>2-6</sub> alkoxycarbonyl groups, and halogen atoms; a cyano group; a carboxyl group; a C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> hydroxalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkylthio group; a C<sub>2-6</sub> alkanoyloxy group; a C<sub>2-6</sub> alkanoyloxy C<sub>1-6</sub> alkyl group; a phenoxy group; a phenylthio group; an N-(C<sub>1-6</sub> alkyl)toluidino group; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkyl group; a piperidino group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkoxy group; a pyrrolidino group substituted with a C<sub>1-6</sub> alkyl group; a morpholino group substituted with a C<sub>1-6</sub> alkyl group; a morpholinyl group; a morpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a homomorpholinyl group; a thiomorpholino group; a thiomorpholino group substituted with a C<sub>1-6</sub> alkyl group; a thiomorpholinyl group; a thiomorpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a piperadiny group; a piperadin-1-yl group substituted with a C<sub>1-6</sub> alkyl group at the 4-position; a homopiperidiny group; a homopiperidiny group substituted with a C<sub>1-6</sub> alkyl group; a pyridylthio group; a quinolyl group; a furyl group; an oxetanyl group; an oxolanyl group; a dioxolanyl group; a dioxolanyl group substituted with a C<sub>1-6</sub> alkyl group; an oxanyl group; a dioxanyl group; a dioxanyl group substituted with a C<sub>1-6</sub> alkyl group; a benzodioxanyl group; a

pyrrolidin-1-yl group; a pyrrolidinyl group; an N-(C<sub>1-6</sub> alkyl)pyrrolidinyl group; a piperidinyl group; an N-(C<sub>1-6</sub> alkyl)piperidinyl group; a pyrrolyl group; a thienyl group; a thiazolyl group; a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a 2,6-purindion-7-yl group substituted with C<sub>1-6</sub> alkyl group(s); a furfuryl group; a di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-6</sub> alkoxy carbonyl group; or a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; m is an integer of 1 to 6; and n is an integer of 0 to 6]; or a group represented by the formula: -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup> [wherein R<sup>8</sup> and R<sup>9</sup> are identical or different and represent a hydrogen atom, a C<sub>1-10</sub> alkyl group, a C<sub>2-6</sub> alkanoyl group, an isoxazolyl group, an isoxazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiadiazolyl group, a thiadiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiazolyl group, a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridyl group, a pyridyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, a pyridazinyl group, a pyridazinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, an indazolyl group, or a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl groups, or alternatively, taken together with the nitrogen atom to which they are bonded, form a 3,5-dioxopiperadino group, a pyrrolidinyl group, a piperidino group, or a morpholino group], or alternatively, the two groups adjacent to each other of R<sup>1</sup> to R<sup>5</sup>, taken together with the benzene ring to which they are bonded, form a phthalimide ring; a phthalimide ring substituted with a C<sub>1-6</sub> alkyl group; an indole ring; an indane ring; an indazole ring; a benzotriazole ring; an S,S-dioxobenzothiophene ring; a 2,3-dihydroimidazo[2,1-b]benzothiazole ring; a dibenzofuran ring; a dibenzofuran ring substituted with a C<sub>1-6</sub> alkoxy group; a fluorene ring; a fluorene ring substituted with a halogen atom; a pyrene ring; a carbostyryl ring; a carbostyryl ring substituted

with a C<sub>1-6</sub> alkyl group; a naphthalene ring; a naphthalene ring substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, nitro groups, and C<sub>1-6</sub> alkyl groups; a 1,2,3,4-tetrahydronaphthalene ring; a quinoline ring; a quinoline ring substituted with a C<sub>1-6</sub> alkyl group; an isoquinoline ring; a 2-oxo-a-chromene ring; a 2-oxo-a-chromene ring substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl groups; a cinnolin ring; a cinnolin ring substituted with a C<sub>1-6</sub> alkyl group; a phthalazindione ring; a benzothiazol ring; a benzothiazol ring substituted with a C<sub>1-6</sub> alkyl group; a benzodioxorane ring; or a benzobutyrolactone ring,  
or a pharmaceutically-acceptable salt thereof.

5. (Twice amended) A hydroxyformamidine derivative represented by the formula:



wherein at least one of R<sup>11</sup> to R<sup>55</sup> represents a C<sub>5-14</sub> alkyl group; a C<sub>2-6</sub> alkenyl group; a C<sub>3-8</sub> cycloalkyl C<sub>1-6</sub> alkyl group; a C<sub>2-6</sub> alkynyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>2-10</sub> alkanoyl group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>1-6</sub> hydroxyalkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alkoxycarbonyl group; a 3-phenyl-2-propenylcarbonyl group; a C<sub>2-6</sub> alkoxycarbonyl C<sub>1-6</sub> alkyl group; a di(C<sub>1-6</sub> alkyl)amino C<sub>2-6</sub> alkoxycarbonyl group; a mono- or di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-10</sub> alkanoylamino group; a C<sub>2-6</sub> alkanoylamino group substituted with a C<sub>1-6</sub> alkyl group; a benzoylamino group; a carbamoyl group; a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl or phenyl groups; an N-(N',N'-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl)carbamoyl group; a cyano group; a cyano C<sub>1-6</sub> alkyl group; a C<sub>1-6</sub> alkylsulfonyl group; a

phenylsulfonyl group; a C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkyl group; a phenylsulfonyl C<sub>1-6</sub> alkylthio group wherein the benzene ring is substituted with 1 to 5 halogen atoms; a phenyl group; a benzyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a biphenyl group; an α-cyanobenzyl group; an α-cyanobenzyl group substituted with 1 to 5 halogen atoms; a benzyl group substituted with a bicyclo[2.2.1]-hept-5-en-2,3-dicarboxyimidyl group; a ~~benzoyl group~~; a styryl group; a styryl group substituted with 1 to 5 substituents selected from the group consisting of C<sub>1-6</sub> alkoxy groups and di(C<sub>1-6</sub> alkyl)amino alkyl groups; a pyrrolidin-1-yl ~~pyrrolidino~~-group; a piperidino group; a morpholino group; a pyridyl group; a pyrimidinyl group; a pyrimidinyl group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups and C<sub>1-6</sub> alkoxy groups; a phthalimidoyl group; a phthalimidoyl group substituted with 1 to 3 halogen atoms; an N-carbazolyl group; a dioxopiperidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a phenylsulfonylamino group; a phenylsulfonylamino group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a C<sub>1-6</sub> alkylaminosulfonyl C<sub>1-6</sub> alkyl group; a thiadiazolyl group; an oxadiazolyl group; an oxadiazolyl group substituted with a substituted phenyl group wherein the substituents in the substituted phenyl group are 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a pyrrolidinyl group; a pyrazolyl group; a pyrazolyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and trifluoromethyl groups; a furyl group; a furyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>2-6</sub> alkoxycarbonyl groups; a thienopyrimidinylthio group; a thienopyrimidinylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a thienopyridylthio group;

a thienopyridylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a benzothiazolylthio group; a benzothiazolylthio group substituted with 1 to 3 halogen atoms; a group represented by the formula: -Y-(CR<sup>61</sup>R<sup>62</sup>)<sub>m</sub>-(CR<sup>63</sup>R<sup>64</sup>)<sub>n</sub>-R<sup>77</sup> [wherein Y represents an oxygen or sulfur atom; R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup> are identical or different and represent a hydrogen atom, a halogen atom, a C<sub>1-4</sub> alkyl group, or a trifluoromethyl group; R<sup>77</sup> represents a halogen atom; a ~~C<sub>4-14</sub> alkyl group~~; a C<sub>3-8</sub> cycloalkyl group; a C<sub>2-10</sub> alkenyl group; a ~~C<sub>2-6</sub> alkynyl group~~; a phenyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of nitro groups, cyano groups, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>1-6</sub> alkylthio groups, phenyl groups, phenoxy groups, phenethyl groups, C<sub>2-6</sub> alkoxycarbonyl groups, and halogen atoms; a cyano group; a carboxyl group; a C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkylthio group; a C<sub>2-6</sub> alkanoyloxy group; a C<sub>2-6</sub> alkanoyloxy C<sub>1-6</sub> alkyl group; a phenoxy group; a phenylthio group; an N-(C<sub>1-6</sub> alkyl)toluidino group; a pyrrolidin-1-yl pyrrolidino-group; a piperidino group; a morpholino group; a pyridyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkyl group; a piperidino group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkoxy group; a pyrrolidin-1-yl pyrrolidino-group substituted with a C<sub>1-6</sub> alkyl group; a morpholino group substituted with a C<sub>1-6</sub> alkyl group; a morpholinyl group; a morpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a homomorpholinyl group; a thiomorpholino group; a thiomorpholino group substituted with a C<sub>1-6</sub> alkyl group; a thiomorpholinyl group; a thiomorpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a piperazinyl piperadiny-group; a piperazin

iperadin

1-yl group substituted with a C<sub>1-6</sub> alkyl group at the 4-position; a homopiperidinyl group; a homopiperidinyl group substituted with a C<sub>1-6</sub> alkyl group; a

pyridylthio group; a quinolyl group; a furyl group; an oxetanyl group; an oxolanyl group; a dioxolanyl group; a dioxolanyl group substituted with a C<sub>1-6</sub> alkyl group; an oxanyl group; a dioxanyl group; a dioxanyl group substituted with a C<sub>1-6</sub> alkyl group; a benzodioxanyl group; a pyrrolidin-1-yl group; a pyrrolidinyl group; an N-(C<sub>1-6</sub> alkyl)pyrrolidinyl group; a piperidinyl group; an N-(C<sub>1-6</sub> alkyl)piperidinyl group; a pyrrolyl group; a thieryl group; a thiazolyl group; a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a 2,6-purindion-7-yl group substituted with at least one C<sub>1-6</sub> alkyl group; a furfuryl group; a di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-6</sub> alkoxycarbonyl group; or a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; m is an integer of 1 to 6; and n is an integer of 0 to 6]; or a group represented by the formula: -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup> [wherein R<sup>8</sup> and R<sup>9</sup> are identical or different and represent a hydrogen atom, a C<sub>1-10</sub> alkyl group, a C<sub>2-6</sub> alkanoyl group, an isoxazolyl group, an isoxazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiadiazolyl group, a thiadiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiazolyl group, a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridyl group, a pyridyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridazinyl group, a pyridazinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, an indazolyl group, or a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl groups, or alternatively, taken together with the nitrogen atom to which they are bonded, form a 3,5-dioxopiperazin-1-yl ~~dioxopiperadino~~-group, a pyrrolidinyl group, a piperidino group, or a morpholino group], or alternatively,

the two groups adjacent to each other of R<sup>11</sup> to R<sup>55</sup>, taken together with the benzene ring to which they are bonded, form a phthalimide ring; a phthalimide ring substituted with a C<sub>1-6</sub>

alkyl group; an indole ring; an indane ring; an indazole ring; a benzotriazole ring; an S,S-dioxobenzothiophene ring; a 2,3-dihydroimidazo[2,1-b]benzothiazole ring; a dibenzofuran ring; a dibenzofuran ring substituted with a C<sub>1-6</sub> alkoxy group; a fluorene ring; a fluorene ring substituted with a halogen atom; a pyrene ring; a carbostyryl ring; a carbostyryl ring substituted with a C<sub>1-6</sub> alkyl group; a naphthalene ring; a naphthalene ring substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, nitro groups, and C<sub>1-6</sub> alkyl groups; a 1,2,3,4-tetrahydronaphthalene ring; a quinoline ring; a quinoline ring substituted with a C<sub>1-6</sub> alkyl group; an isoquinoline ring; a 2-oxo- $\alpha$ -chromene ring; a 2-oxo- $\alpha$ -chromene ring substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl groups; a cinnolin ring; a cinnolin ring substituted with a C<sub>1-6</sub> alkyl group; a phthalazindione ring; a benzothiazol ring; a benzothiazol ring substituted with a C<sub>1-6</sub> alkyl group; a benzodioxorane ring; and a benzobutyrolactone ring, and the remaining groups of R<sup>11</sup> to R<sup>55</sup> are identical or different and represent a hydrogen atom, a C<sub>1-4</sub> alkyl group, a C<sub>1-4</sub> alkoxy group, a trifluoromethyl group, a nitro group, or a halogen atom, or a pharmaceutically-acceptable salt thereof.

6. (Amended) The hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof, according to Claim 5, wherein at least one of R<sup>11</sup> to R<sup>55</sup> represents a C<sub>5-14</sub> alkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>2-6</sub> alkynyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>2-10</sub> alkanoyl group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>1-6</sub> hydroxyalkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alcoxycarbonyl group; a 3-phenyl-2-propenyloxycarbonyl group; a C<sub>2-6</sub> alcoxycarbonyl C<sub>1-6</sub> alkyl group; a di(C<sub>1-6</sub> alkyl)amino C<sub>2-6</sub> alcoxycarbonyl group; a mono- or di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-10</sub> alkanoylamino group; a C<sub>2-6</sub> alkanoylamino group substituted

with a C<sub>1-6</sub> alkyl group; a benzoylamino group; a carbamoyl group; a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl or phenyl groups; an N-(N',N'-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl)carbamoyl group; a cyano group; a cyano C<sub>1-6</sub> alkyl group; a C<sub>1-6</sub> alkylsulfonyl group; a phenylsulfonyl group; a C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkyl group; a phenylsulfonyl C<sub>1-6</sub> alkylthio group wherein the benzene ring is substituted with 1 to 5 halogen atoms; a phenyl group; a benzyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a biphenyl group; an α-cyanobenzyl group; an α-cyanobenzyl group substituted with 1 to 5 halogen atoms; a benzyl group substituted with a bicyclo[2.2.1]-hept-5-en-2,3-dicarboxyimidyl group; a ~~benzoyl group~~; a styryl group; a styryl group substituted with 1 to 5 substituents selected from the group consisting of C<sub>1-6</sub> alkoxy groups and di(C<sub>1-6</sub> alkyl)amino alkyl groups; a pyrrolidin-1-yl pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyrimidinyl group; a pyrimidinyl group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups and C<sub>1-6</sub> alkoxy groups; a phthalimidoyl group; a phthalimidoyl group substituted with 1 to 3 halogen atoms; an N-carbazolyl group; a dioxopiperidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a phenylsulfonylamino group; a phenylsulfonylamino group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a C<sub>1-6</sub> alkylaminosulfonyl C<sub>1-6</sub> alkyl group; a thiadiazolyl group; an oxadiazolyl group; an oxadiazolyl group substituted with a substituted phenyl group wherein the substituents in the substituted phenyl group are 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>1-6</sub> alkoxy groups; a pyrrolidinyl group; a pyrazolyl group; a pyrazolyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and trifluoromethyl groups; a furyl group; a furyl

group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>2-6</sub> alkoxy carbonyl groups; a thienopyrimidinylthio group; a thienopyrimidinylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a thienopyridylthio group; a thienopyridylthio group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a benzothiazolylthio group; a benzothiazolylthio group substituted with 1 to 3 halogen atoms; or a group represented by the formula: -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup> [wherein R<sup>8</sup> and R<sup>9</sup> are identical or different and represent a hydrogen atom, a C<sub>1-10</sub> alkyl group, a C<sub>2-6</sub> alkanoyl group, an isoxazolyl group, an isoxazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiadiazolyl group, a thiadiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridyl group, a pyridyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridazinyl group, a pyridazinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, an indazolyl group, or a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl groups, or alternatively, taken together with the nitrogen atom to which they are bonded, form a 3,5-dioxopiperadino group, a pyrrolidinyl group, a piperidino group, or a morpholino group], or alternatively,

the two groups adjacent to each other of R<sup>11</sup> to R<sup>55</sup>, taken together with the benzene ring to which they are bonded, form a phthalimide ring; a phthalimide ring substituted with a C<sub>1-6</sub> alkyl group; an indole ring; an indane ring; an indazole ring; a benzotriazole ring; an S,S-dioxobenzothiophene ring; a 2,3-dihydroimidazo[2,1-b]benzothiazole ring; a dibenzofuran ring; a dibenzofuran ring substituted with a C<sub>1-6</sub> alkoxy group; a fluorene ring; a fluorene ring substituted with a halogen atom; a pyrene ring; a carbostyryl ring; a carbostyryl ring substituted

with a C<sub>1-6</sub> alkyl group; a naphthalene ring; a naphthalene ring substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, nitro groups, and C<sub>1-6</sub> alkyl groups; a 1,2,3,4-tetrahydronaphthalene ring; a quinoline ring; a quinoline ring substituted with a C<sub>1-6</sub> alkyl group; an isoquinoline ring; a 2-oxo- $\alpha$ -chromene ring; a 2-oxo- $\alpha$ -chromene ring substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, and C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkyl groups; a cinnolin ring; a cinnolin ring substituted with a C<sub>1-6</sub> alkyl group; a phthalazindione ring; a benzothiazol ring; a benzothiazol ring substituted with a C<sub>1-6</sub> alkyl group; a benzodioxorane ring; and a benzobutyrolactone ring, and the remaining groups of R<sup>11</sup> to R<sup>55</sup> are identical or different and represent a hydrogen atom, a C<sub>1-4</sub> alkyl group, a C<sub>1-4</sub> alkoxy group, a trifluoromethyl group, a nitro group, or a halogen atom.

7. (Amended) The hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof, according to Claim 6, wherein at least one of R<sup>11</sup> to R<sup>55</sup> represents a C<sub>5-14</sub> alkyl group; a C<sub>2-6</sub> alkynyl group; a C<sub>3-8</sub> cycloalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>2-10</sub> alkanoyl group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>1-6</sub> hydroxyalkyl group substituted with 1 to 6 halogen atoms; a C<sub>2-6</sub> alcoxycarbonyl group; a 3-phenyl-2-propenyloxycarbonyl group; a C<sub>2-6</sub> alcoxycarbonyl C<sub>1-6</sub> alkyl group; a di(C<sub>1-6</sub> alkyl)amino C<sub>2-6</sub> alcoxycarbonyl group; a mono- or di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-10</sub> alkanoylamino group; a C<sub>2-6</sub> alkanoylamino group substituted with a C<sub>1-6</sub> alkyl group; a carbamoyl group; a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl or phenyl groups; an N-(N',N'-di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkyl)carbamoyl group; a cyano group; a cyano C<sub>1-6</sub> alkyl group; a C<sub>1-6</sub> alkylsulfonyl group; a phenylsulfonyl group; a C<sub>1-6</sub> alkylthio C<sub>1-6</sub> alkyl group; a phenyl group; a benzyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of cyano groups, halogen atoms, C<sub>1-6</sub> alkyl

groups, and C<sub>1-6</sub> alkoxy groups; a biphenyl group; an α-cyanobenzyl group; an α-cyanobenzyl group substituted with 1 to 5 halogen atoms; a ~~benzoyl group~~; a pyrrolidino group; a piperidino group; a morpholino group; a pyridyl group; a pyrimidinyl group; a pyrimidinyl group substituted with 1 to 3 substituents selected from the group consisting of C<sub>1-6</sub> alkyl groups and C<sub>1-6</sub> alkoxy groups; a pyrrolidinyl group; a pyrazolyl group; a pyrazolyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and trifluoromethyl groups; a furyl group; a furyl group substituted with 1 to 3 substituents selected from the group consisting of halogen atoms, C<sub>1-6</sub> alkyl groups, and C<sub>2-6</sub> alkoxycarbonyl groups; or a group represented by the formula: -SO<sub>2</sub>NR<sup>8</sup>R<sup>9</sup> [wherein R<sup>8</sup> and R<sup>9</sup> are identical or different and represent a hydrogen atom, a C<sub>1-10</sub> alkyl group, a C<sub>2-6</sub> alkanoyl group, an isoxazolyl group, an isoxazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiadiazolyl group, a thiadiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a thiazolyl group, a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyridyl group, a pyridyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups, a pyrimidinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, a pyridazinyl group, a pyridazinyl group substituted with 1 to 3 C<sub>1-6</sub> alkoxy groups, an indazolyl group, or a carbamoyl group mono- or di-substituted with C<sub>1-6</sub> alkyl groups, or alternatively, taken together with the nitrogen atom to which they are bonded, form a 3,5-dioxopiperazin-1-yl dioxopiperadino-group, a pyrrolidinyl group, a piperidino group, or a morpholino group] and the remaining groups of R<sup>11</sup> to R<sup>55</sup> are identical or different and represent a hydrogen atom, a C<sub>1-4</sub> alkyl group, a C<sub>1-4</sub> alkoxy group, a trifluoromethyl group, a nitro group, or a halogen atom.

8. (Amended) The hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof, according to Claim 5, wherein at least one of R<sup>11</sup> to R<sup>55</sup> represents a group represented by the formula: -Y-(CR<sup>61</sup>R<sup>62</sup>)<sub>m</sub>-(CR<sup>63</sup>R<sup>64</sup>)<sub>n</sub>-R<sup>77</sup> [wherein Y represents an oxygen or sulfur atom; R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup> are identical or different and represent a hydrogen atom, a halogen atom, a C<sub>1-4</sub> alkyl group, or a trifluoromethyl group; R<sup>77</sup> represents a halogen atom; a ~~C<sub>4-14</sub> alkyl group~~; a C<sub>3-8</sub> cycloalkyl group; a C<sub>2-10</sub> alkenyl group; a ~~C<sub>2-6</sub> alkynyl group~~; a phenyl group; a phenyl group substituted with 1 to 3 substituents selected from the group consisting of nitro groups, cyano groups, C<sub>1-6</sub> alkyl groups, C<sub>1-6</sub> alkoxy groups, C<sub>1-6</sub> alkylthio groups, phenyl groups, phenoxy groups, phenethyl groups, C<sub>2-6</sub> alkoxy carbonyl groups, and halogen atoms; a cyano group; a carboxyl group; a C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> hydroxyalkyl group; a C<sub>3-8</sub> cycloalkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy C<sub>1-6</sub> alkoxy group; a C<sub>1-6</sub> alkylthio group; a C<sub>2-6</sub> alkanoyloxy group; a C<sub>2-6</sub> alkanoyloxy C<sub>1-6</sub> alkyl group; a phenoxy group; a phenylthio group; an N-(C<sub>1-6</sub> alkyl)toluidino group; a pyrrolidin-1-yl ~~pyrrolidino~~-group; a piperidino group; a morpholino group; a pyridyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkyl group; a piperidino group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl group substituted with a C<sub>1-6</sub> alkoxy group; a pyrrolidin-1-yl ~~pyrrolidino~~-group substituted with a C<sub>1-6</sub> alkyl group; a morpholino group substituted with a C<sub>1-6</sub> alkyl group; a homomorpholiny group; a thiomorpholino group; a thiomorpholino group substituted with a C<sub>1-6</sub> alkyl group; a thiomorpholiny group; a thiomorpholiny group substituted with a C<sub>1-6</sub> alkyl group; a piperazinyl piperadiny group; a piperazin

 group substituted with a C<sub>1-6</sub> alkyl group at the 4-position; a homopiperidiny group; a homopiperidiny group substituted with a C<sub>1-6</sub> alkyl group; a

pyridylthio group; a quinolyl group; a furyl group; an oxetanyl group; an oxolanyl group; a dioxolanyl group; a dioxolanyl group substituted with a C<sub>1-6</sub> alkyl group; an oxanyl group; a dioxanyl group; a dioxanyl group substituted with a C<sub>1-6</sub> alkyl group; a benzodioxanyl group; a pyrrolidone-1-yl group; a pyrrolidinyl group; an N-(C<sub>1-6</sub> alkyl)pyrrolidinyl group; a piperidinyl group; an N-(C<sub>1-6</sub> alkyl)piperidinyl group; a pyrrolyl group; a thietyl group; a thiazolyl group; a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a 2,6-purindion-7-yl group substituted with C<sub>1-6</sub> alkyl group(s); a furfuryl group; a di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-6</sub> alkoxy carbonyl group; or a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; m is an integer of 1 to 6; and n is an integer of 0 to 6], and the remaining groups of R<sup>11</sup> to R<sup>55</sup> are identical or different and represent a hydrogen atom, a C<sub>1-4</sub> alkyl group, a C<sub>1-4</sub> alkoxy group, a trifluoromethyl group, a nitro group, or a halogen atom.

9. (Amended) The hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof, according to Claim 8, wherein at least one of R<sup>11</sup> to R<sup>55</sup> represents a group represented by the formula: -O-(CR<sup>61</sup>R<sup>62</sup>)<sub>m</sub>-(CR<sup>63</sup>R<sup>64</sup>)<sub>n</sub>-R<sup>77</sup> [wherein R<sup>61</sup>, R<sup>62</sup>, R<sup>63</sup>, and R<sup>64</sup> are identical or different and represent a hydrogen atom, a halogen atom, a C<sub>1-4</sub> alkyl group, or a trifluoromethyl group; R<sup>77</sup> represents a di(C<sub>1-6</sub> alkyl)amino group; a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; a piperidyl group; a piperidyl piperidinyl group substituted with a C<sub>1-6</sub> alkyl group; a piperidino group; a piperidino group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl group; a pyridyl pyridinyl group substituted with a C<sub>1-6</sub> alkyl group; a pyridyl pyridinyl group substituted with a C<sub>1-6</sub> alkoxy group; a pyridylthio group; a pyrrolidino group; a pyrrolidino group substituted with a C<sub>1-6</sub> alkyl group; a pyrrolidone-1-yl group; a pyrrolidinyl group; a pyrrolidinyl group substituted with a C<sub>1-6</sub> alkyl group; a pyrrolyl group; a thietyl group; a thiazolyl group; a thiazolyl group substituted with 1 to 3 C<sub>1-6</sub> alkyl groups; a 2,6-purindion-7-yl group substituted with C<sub>1-6</sub> alkyl group(s); a furfuryl group; a di(C<sub>1-6</sub> alkyl)amino group; a C<sub>2-6</sub> alkoxy carbonyl group; or a di(C<sub>1-6</sub> alkyl)amino C<sub>1-6</sub> alkoxy group; m is an integer of 1 to 6; and n is an integer of 0 to 6].

morpholino group; a morpholino group substituted with a C<sub>1-6</sub> alkyl group; a morpholinyl group; a morpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a homomorpholinyl group; a thiomorpholino group; a thiomorpholino group substituted with a C<sub>1-6</sub> alkyl group; a thiomorpholinyl group; a thiomorpholinyl group substituted with a C<sub>1-6</sub> alkyl group; a piperazinyl piperadinyl group; piperazina piperadin-1-yl group substituted with a C<sub>1-6</sub> alkyl group at the 4-position; a homopiperidinyl group; or a homopiperidinyl group substituted with a C<sub>1-6</sub> alkyl group; m is an integer of 1 to 6; and n is an integer of 0 to 6], and the remaining groups of R<sup>11</sup> to R<sup>55</sup> are identical or different and represent a hydrogen atom, a C<sub>1-4</sub> alkyl group, a C<sub>1-4</sub> alkoxy group, a trifluoromethyl group, a nitro group, or a halogen atom.

11. (Amended) A method of inhibiting An inhibitor for production of 20-hydroxyeicosatetraenoic acid, comprising administering an effective amount of, as an effective ingredient, the hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof according to any one of claimsClaims 5 to 940.

12. (Amended) A therapeutic method for treatment of a kidney disease, a cerebrovascular disease, or a circulatory disease, said method comprising administering to a patient having a kidney disease, a cerebrovascular disease, or a circulatory disease an effective amount of the hydroxyformamidine derivative or a pharmaceutically-acceptable salt thereof according to any one of claims 5 to 9~~The inhibitor for production of 20-hydroxyeicosatetraenoic acid, according to Claim 11, which is a therapeutic agent for kidney diseases, cerebrovascular diseases, or circulatory diseases.~~

**Claims 13-14 are added as new claims.**